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ISMP Publishes Top 10 List of Medication Errors and Hazards Covered in Newsletter

Horsham, Pa. —Reflecting on the 20-year anniversary of the watershed Institute of Medicine report *To Err Is Human*, the Institute for Safe Medication Practices (ISMP) has published a "top ten" list of the most persistent medication errors and safety issues covered in its newsletter in 2019. The list focuses on safety problems that are frequently reported, caused serious harm to patients, and could be avoided or minimized with system and practice changes attainable by all healthcare providers.

The list appears in the January 16, 2020, issue of the *ISMP Medication Safety Alert!*® Acute Care newsletter. ISMP believes that these issues merit attention and priority if action has not already been taken to mitigate risk, and the newsletter article provides specific prevention recommendations. ISMP hopes that the following hazards and errors become an essential part of healthcare organizations' strategic medication safety improvement plans this year:

1. **Selecting the wrong medication after entering the first few letters of the drug name**. Entering just the first few letter characters of a drug name or combination of the first few letters and product strength can allow the presentation of similar-looking drug names on technology screens, leading to selection errors. This is a problem that has increased in frequency with the upswing in technology use. In fact, wrong selection errors may now rival or exceed those made with handwritten orders.

2. **Daily instead of weekly oral methotrexate for non-oncologic conditions.** An ISMP QuarterWatch® report analysis of methotrexate administration errors over 18 months between 2018 and 2019 found that approximately half were made by older patients who became confused about frequency, and half by healthcare providers who inadvertently prescribed, labeled, and/or dispensed methotrexate daily when weekly was intended.

3. **Errors and hazards due to look-alike labeling of manufacturers' products**. Highly stylized graphics and prominent corporate names and logos that may overshadow essential information, along with similar label and cap colors, can make different products look alike and lead to mix-ups.

4. **Misheard drug orders or recommendations during verbal/telephone communication**. Even in an era of electronic health records, certain situations still require verbal or telephone orders for medications, such as prescribing a drug during an emergency or sterile procedure, or oral communication of consultant drug therapy recommendations. Those oral communications can be misunderstood and result in errors if not verified.

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5. **Unsafe "overrides" with automated dispensing cabinets (ADCs)**. ISMP continues to receive reports of unsafe practices associated with ADCs that have jeopardized patients. Now that ADC use is widespread, healthcare organizations should review safe use and identify vulnerabilities; ISMP's ADC guidelines outline standard best practices and processes.

6. **Unsafe practices associated with IV push medications**. In 2019, ISMP conducted a gap analysis of safe adult IV push medication administration and identified areas in need of substantial improvement. Healthcare organizations are strongly encouraged to follow ISMP's safe practice guidelines for adult IV push medications.

7. **Wrong route (intraspinal injection) errors with tranexamic acid**. Multiple cases have recently been reported, and this error has a mortality rate of 50%. Tranexamic acid can be mixed up with bupivacaine or ropivacaine, since all three are available in vials with blue caps and are often stored upright near each other with only the caps (not labels) visible

8. **Unsafe labeling of prefilled syringes and infusions by 503b compounders**. ISMP has received an increasing number of error reports related to this issue. The U.S. Food and Drug Administration (FDA) does not hold outsourcing facilities to the same labeling standards as for commercial manufacturers, which increases the chance for variations that can lead to confusion.

9. **Unsafe use of syringes for vinca alkaloids**. Because vinca alkaloids continue to be erroneously administered by the intrathecal route, in 2019 ISMP called upon the FDA to remove administration by syringe from the prescribing information, in favor of minibag administration only. Despite strong advocacy to always dilute vinca alkaloids in minibags, approximately 15-20% of U.S. hospitals still use syringes, mainly for pediatric patients.

10. **1,000-fold overdoses with zinc**. Critical dose warnings are not available for IV zinc and other trace elements used as parenteral nutrition additives, making errors more likely, particularly involving pediatric patients. Even 1,000-fold overdoses can happen.

For a copy of the ISMP newsletter article on the top 10 medication hazards and errors, visit: https://www.ismp.org/acute-care/medication-safety-alert-january-16-2020. Please note that sign-in and/or creation of a free user account may be required for access.

About the Institute for Safe Medication Practices

The Institute for Safe Medication Practices (ISMP) is the only 501c (3) nonprofit organization devoted entirely to preventing medication errors. ISMP is known and respected as the gold standard for medication safety information. For more than 25 years, it also has served as a vital force for progress. ISMP's advocacy work alone has resulted in numerous necessary changes in clinical practice, public policy, and drug labeling and packaging. Among its many initiatives, ISMP runs the only national voluntary practitioner medication error reporting program, publishes newsletters with real-time error information read and trusted throughout the global healthcare community, and offers a wide range of unique educational programs, tools, and guidelines. In 2020, ISMP formally affiliated with ECRI Institute to create one of the largest healthcare quality and safety entities in the world. As an independent watchdog organization, ISMP receives no advertising revenue and depends entirely on charitable donations, educational grants, newsletter subscriptions, and volunteer efforts to pursue its life-saving work. Learn more at www.ismp.org.

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